

X. ENERGY EFFICIENCY

Background

Energy supply, use and conservation emerged as a major statewide issue in 2001 as the Housing Element was being updated. The availability of energy has affected almost every aspect of life. However, the Housing Element focuses only on those parts of the issue that apply to housing and, specifically, the City's role in seeing that energy is used efficiently.

The relevant Housing Element issues include:

- How communities can be designed to accommodate alternative modes of transportation, including walking, bicycling and public transportation.
- How houses can be constructed to conserve energy.
- How the City's zoning standards can accommodate small energy generating devices without impacting other residents.
- How lower income households can obtain financial assistance with utility bills and to improve energy efficiency in their homes.

Community Design

Mountain View has been a leader in facilitating transit-oriented development around rail stations. Over 1,000 housing units have been built at the San Antonio and Downtown Caltrain stations and at the Whisman light rail station since 1994. These projects, as well as other housing developments, are designed with narrow streets, bike routes and lanes and sidewalks that lead to transit stations and commercial services. These designs reduce dependence on the auto. Trees are required along the streets and in parking lots to provide shade and reduce heat build-up.

Building Design

Improved energy conservation can be obtained through designs that take advantage of solar energy and natural ventilation. These design elements include building orientation, shading opportunities, daylight access, overhangs and other features. The City can play a role in emphasizing energy-conserving designs in its normal design review process.

Every city is required to comply with Title 24 of the California Administrative Code. This is the portion of the Uniform Building Code that establishes specifications for insulation, glazing, heating and cooling systems, water heaters, swimming pool heaters and other elements of building construction that can help save energy. Mountain View attempts to implement all new requirements as quickly as possible. To make compliance easier, the City provides clear and understandable instructions and compliance forms for builders. A streamlined review process (with no special energy fees) also ensures compliance.

Another component of building construction and remodeling where energy savings can be achieved is through recycling of demolition debris and unused materials. Rather than haul them to the landfill, these materials can often be recycled. The City can assist by developing programs that encourage and facilitate recycling. The City can also investigate "green building" techniques, which are environmentally friendly.

Home-Based Energy Generating Devices

While solar panels (primarily for heating water) have been in use for about 30 years, new types of small-scale energy generating devices are entering the field—such as photovoltaic cells and even wind generators—that produce significant amounts of a home's electricity. Mountain View, like most cities, did not anticipate the use of these devices in individual homes and therefore does not have zoning standards to accommodate them. On the other hand, Mountain View's zoning ordinance also does not prohibit them and the City has been approving devices that fit within the allowed building envelope of a residential structure. In order to clarify the approval process for homeowners who wish to install energy-generating devices, the City's zoning ordinance should be revised to specifically indicate where and how they could be installed. The new standards should ensure that the home-based electrical systems are safe and do not create noise, glare, visual or other impacts on adjacent residences.

Low-Income Households

High utility bills are a concern for everyone, but they especially affect the affordability of housing for low-income residents. There are a number of programs offered through Pacific Gas and Electric (PG&E), the power utility serving Mountain View, and non-profit organizations that subsidize the cost of utilities for qualifying lower income households.

For financial assistance, PG&E has the CARE (California Alternate Rates for Energy) program that provides a 20 percent discount on monthly energy bills for low-income households and non-profit group living facilities. For one-time energy bill assistance when there is a sudden, unexpected financial hardship, PG&E provides assistance through the Salvation Army. Economic and Social Opportunities, Inc. (ESO), a non-profit organization that serves Santa Clara County, administers the Low-Income Home Energy Assistance Program (LI-HEAP) which are federal funds also available to help low-income households pay their utility bills.

Both PG&E and ESO also have weatherization programs that provide for the installation of weather stripping and insulation and door and furnace repairs. The City contracts with ESO to provide these services to low-income Mountain View homeowners along with its Home Access and Home Repair Program. PG&E has its Energy Partners Program that also provides free weatherization services to lower income homeowners.

In addition to programs that serve individual households, the City has funded energy-saving improvements (such as a new boiler) at lower income housing projects with its Community Development Block Grant Program funds.

ENERGY-RELATED GOALS, POLICIES AND IMPLEMENTING ACTIONS

The Goals, Policies and Actions state the City's policies and implementing actions relating to energy efficiency for housing. Since most new residential development in the community will be infill development on relatively small lots, the emphasis is on ways to conserve energy within a structure or add alternative energy producing devices to structures. Infill development is often constrained by lot size and shape so that it is difficult to position buildings specifically to maximize solar orientation.